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10/566,010

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EXAMINER

ANWAR, MOHAMMAD S

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/566,010 | Applicant(s) SCHOLLMEIER ET AL. | |
| | Examiner MOHAMMAD ANWAR | Art Unit 4125 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 10-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/25/06, 4/26/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because Figure 1 should be labeled with descriptive legends e.g. R (Router). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10 line 7 recites "the destination node" which has no antecedent basis. Similar problem exist in claim 10 line 8, line 13, line 19.

In claim 10 line 4 recites "a primary routing path" and claim 10 line 11 "a primary routing path" which points out that the phrase "the primary path" that appears in claim 10 lines 6, 13, 17, 19, and in claim 13 is indefinite because it is unclear which previously mentioned "primary path" from lines 4 and 11 "the primary path" refers to. The same problem exists in claim 22. It is suggested to identify the primary routing path of each node separately such as "a primary routing path of first node" and "a primary routing path of second node".

In claim 10 line 26 recites "the destination network" which has no antecedent basis.

In claim 13 line 2 recites "the primary connection path" which has no antecedent basis.

In claim 10 lines 4 and 11 "an alternate routing path" which points out that the phrase "the alternate path" that appears in claim 10 lines 8, 15, and 20 is indefinite because it is unclear which previously mentioned "an alternate routing path" from lines 4 and 11 "the alternate path" refers to. The same problem exists in claim 22. It is suggested to properly identify these term such as "an alternate first or second node path".

Claims 12, 14-21 are rejected because they are dependent on claim 10. Claim 23 is rejected because it is dependent on claim 22.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 10-12, 14-16, 18, 19, 21-27 are rejected under 35 U.S.C. 102(b) as being unpatentable by Suzuki (4884263).

For claim 10, Suzuki discloses a method for reporting a dropped-out connection path of a first network node to a second network node within a packet switching communication network (see column 3 lines 11-15, column 7 lines 62-67), comprising: providing a first routing table to the first node (see column 7 lines 25-26), the first routing table including a primary entry representing a primary routing path and an alternate entry representing an alternate routing path (see Figure 6, column 6 lines 55-59), wherein the primary path is a connection path between the first node and the destination node (see figure 6, column 6 lines 55-59), and wherein the alternate path is a connection path between the first node and the destination node via the second node; providing a second routing table to the second node (see Figure 6, column 6 lines 55-59), the second routing table including a primary entry representing a primary routing path and an alternate entry representing an alternate routing path (see column 8 lines

55-56, Figure 10, column 2 lines 65-67), wherein the primary path is a connection path between the second node and the destination node (See Figures 10 & 11), and wherein the alternate path is a connection path between the second node and the destination node via the first node (see Figure 10 & 11); detecting a first fault by the first node of the primary path of the first node (see column 6 lines 15-26, column 7 line 63); reporting the first fault detected by the first node to the second node (see column 4 lines 42-46); detecting a second fault by the second node of the primary path of the second node (see column 9 line 39-41); inhibiting a transfer of a data packet to the destination network node via the alternate path of the second node (see column 9 lines 42-44); and reporting the second fault detected by the second node to the first node (see column 8 lines 4-7), wherein the relevant alternate routing path entry is used if there is a fault on the primary routing path (see column 9 lines 39-50). whereby a transfer back and forth between the first and second nodes of a data packet to be sent towards the destination network is inhibited (see column 9 lines 6-22), thereby reducing a load of the first and second nodes (see column 1 lines 54-62).

For claims 11 & 12, Suzuki discloses wherein the first and/or second fault is reported via sending a message (see column 9 lines 1-22).

For claims 14 & 23, Suzuki discloses wherein the transfer of the data packet is prevented (see column 7 lines 62-67).

For claim 15, Suzuki discloses wherein the first and/or second fault is reported via a routing protocol (see column 7 lines 62-67, column 8 lines 1-46).

For claim 16, Suzuki discloses reporting the first fault to a neighboring node respective to the first node (see column 8 lines 60-67, column 9 lines 1-6); and informing the neighboring node after the end of the first fault (column 9 lines 37-51).

For claims 18 & 21, Suzuki discloses wherein a node identifier of the first node is used to report the fault to the neighboring node (see column 8 lines 38-46).

For claim 19, Suzuki discloses about informing a neighboring node respective to the second node of the second fault (see column 8 lines 60-67 and column 9 lines 1-6); and informing the neighboring node after the end of the second fault (see column 9 lines 51-56).

For claim 22, Suzuki discloses reporting a dropped-out connection path of a first network node to a second network node within a packet switching communication network (see column 3 lines 11-15, column 7 lines 62-67), comprising: providing a first routing table to the first node (see column 7 lines 25-26), the first routing table including a primary entry representing a primary routing path and an alternate entry representing an alternate routing path (see Figure 6, column 6 lines 55-59), wherein the primary path is a connection path between the first node and the destination node (see figure 6, column 6 lines 55-59), and wherein the alternate path is a connection path between the first node and the destination node via the second node (see Figure 10 & 11); providing a second routing table to the second node (see Figure 10 column 2 lines 49-50), the second routing table including a primary entry representing a primary routing path and an alternate entry representing an alternate routing path (see figure 10 & figure 12, column 8 line 67), wherein the primary path is a connection path between the second

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node and the destination node (see figure 10 & figure 12 & figure 13) , and wherein the alternate path is a connection path between the second node and the destination node via the first node (see figure 10 & figure 12 & figure 13); periodically transferring a message from the first node to the second node while the first node has access to the destination network node via the respective primary path (see column 6 line 15); stopping the periodic transfer when a first fault is detected on the primary path of the first node (see column 6 lines 15-26); detecting a second fault on the primary path of the second node (see column 6 lines 15-26); and avoiding a transfer of a data packet to the destination node via the alternate routing path that leads from the second node to the first node (see Figure 12, column 3 lines 3-5).

For claim 24, Suzuki discloses first network node within a packet switching communication network having a first primary path that is a connection path between the first node and a destination node and a first alternate path that is a connection path between the first node and a second node (See Figure 6, column 6 lines 30-40), and the second node having a second primary path that is a connection path between the second node and the destination node and a second alternate path that is a connection path between the second node and the first node (see column 6 lines 30-40), the first node comprising: a routing table including a primary entry representing the first primary path and an alternate entry representing the first alternate path (see figure 10 & figure 12, column 8 line 67); a first fault indicator that indicates if the first primary path is available (see column 4 lines 42-46); a second fault indicator that indicates if the second primary path is available to the second node (see column 6 lines 15-26); and a receiver

that receives a data packet to be transferred to the destination node (see column 8 lines 4-23); wherein when the first and second fault indicators indicates the paths are unavailable (see column 9 lines 6-22), transfer of the data packet on the first paths is inhibited (see column 9 lines 6-22).

For claim 25, Suzuki discloses wherein the first fault indicator indicates that the first primary path is available (see column 6 lines 15-19), a message is periodically sent the second node to indicate that the path is available (see column 4 lines 32-35).

For claim 26, Suzuki discloses wherein when the first fault indicator indicates that the first primary path is unavailable (see column 8 lines 26-46), the first node stops sending the periodic message (see column 8 lines 38-46).

For claim 27, Suzuki discloses wherein within a time period the first node receives a periodic message from the second node to indicate that the second primary path is available (see column 6 lines 49-67, column 7 lines 1-12), in which the second fault indicator is set to indicate that the second primary path is available (see column 6 lines 15-26), and wherein within the time period the first node does not receive the periodic message and the second fault indicator is set to indicate that the second primary path is unavailable (see column 9 lines 6-22),.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Ofek et al. (6330236).

For claim 13, Suzuki discloses all the subject matter but fails to mention wherein the message is transferred cyclically on the primary connection path. However, Ofek et al. from a similar field of endeavor disclose wherein the message is transferred cyclically on the primary connection path (see column 3 line 1-16, column 4 lines 29-42). Thus, it would have been obvious to one ordinary skill in the art at the time of

invention was made to include Ofek et al. cyclical transfer of messages into Suzuki routing scheme. The method can be implemented in the hardware and software. The motivation of doing this is to provide congestion-free data packet switching for data packets for which capacity in their corresponding forwarding links and time intervals is reserved in advance.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Thaweethal et al. (5546379).

For claims 17 & 20, Suzuki discloses all the subject matter but fails to mention about wherein the fault is reported to the neighboring node within a keep-alive message. However, Thaweethal et al. from a similar field of endeavor disclose wherein the fault is reported to the neighboring node within a keep-alive message (see column 6 lines 61-64). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Thaweethal et al. keep alive message scheme into Suzuki routing scheme. The method can be implemented in the software. The motivation of doing this is to keep the nodes status updated periodically.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kimoto (5034945) and Turner et al. (4550397).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is

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(571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on 571-272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
Examiner
Art Unit 4125

/M. A./
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